

Frequency band (MHz)	Maximum allowable transmitter power		Maximum allowable EIRP	
	Fixed (W)	Mobile (W)	Fixed (dBW)	Mobile (dBW)
2150 to 2160	33
2160 to 2180	20	1
2500 to 2686	33

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¹ For Multipoint Distribution Service at 2160-2162 MHz, EIRP up to 33 dBW may be authorized pursuant to § 21.904 of this part.

18. Section 21.900 is amended to read as follows:

§ 21.900 Eligibility.

Authorizations for stations in this service will be granted to existing and proposed communications common carriers and non-common carriers. Applications will be granted only in cases where the applicant certifies that:

* * * * *

(c) * * *

The applicant shall submit a statement indicating whether service will be provided on a common carrier or a non-common carrier basis. In addition, a common carrier applicant shall submit a statement indicating whether there is any affiliation or relationship to any intended or likely subscriber or program originator. Any applicant for a Multipoint Distribution Service station desiring a preference in the random selection process, in accordance with the procedures set forth in § 1.824, must so indicate as part of its application.

19. Section 21.901(d) is amended to read as follows:

§ 21.901 Frequencies.

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(d) Multipoint Distribution Service frequencies in the 2150-2162 MHz and 2596-2680 MHz bands and associated response channels will be assigned only in accordance with the following conditions:

(1) A Multipoint Distribution Service applicant may file only one application per station per channel or channel group within one service area as determined in accordance with § 21.902(e). The stockholders, the

partners, the owners, the trustees, the beneficiaries, the officers, the directors, or any other person or entity holding any interest in one application for a particular channel or channel group in a particular service area, directly or indirectly, must not have any interest, directly or indirectly, in another application on the same channel or channel group within the same service area.

(2) All applicants for frequencies in these bands must specify the channel or channels being applied for; however, the Commission may on its own initiative assign different channels in the band if it is determined that such action would serve the public interest.

(3) Licensees or conditional licensees of the frequencies in the 2596-2644 MHz band may petition the Commission to authorize exchange of assigned channels to allow adjacent channel operation. For example, one licensee may be assigned channels E1, F1, E2 and F2 and the other licensee could be assigned channels E3, F3, E4 and F4. Such a petition will be granted if the petitioners show that the exchange will result in better service to the public.

(4) Except as noted in Section (d)(6) of this subpart, each applicant filing an MDS application for frequencies in these bands must certify that its transmitters are located a minimum of 80 km (approximately 50 mi) from all authorized or previously applied-for co-channel ITFS or MDS transmitters' coordinates in the 2150-2162 or 2596-2680 MHz bands, except for signal booster transmitter sites.

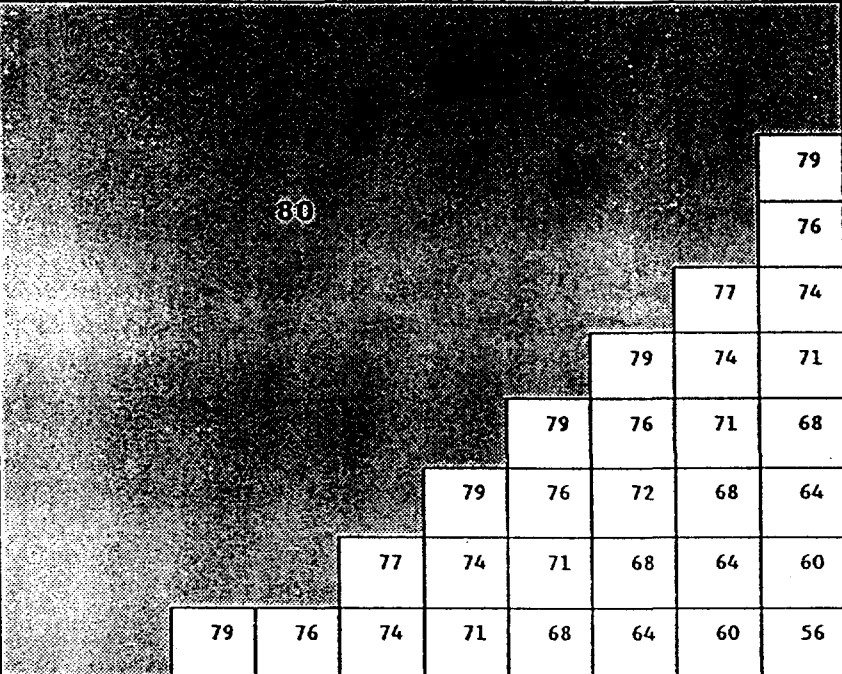
(5) Each applicant filing an MDS application for frequencies in these bands must certify that its transmitter's coordinates are either located at the same coordinates or at a minimum of 48 km (approximately 30 mi) from all authorized or previously applied-for adjacent channel ITFS or MDS transmitters' coordinates in the 2150-2162 or 2590-2686 MHz bands except for signal booster transmitter sites.

(6) Applicants filing applications for frequencies in these bands may locate their Multipoint Distribution Service station transmitters less than 80 km (approximately 50 mi) from all authorized or previously applied-for co-channel ITFS or MDS station transmitters in the 2150-2162 or 2596-2680 MHz bands, if the applicant's proposed MDS station is cross-polarized, specifies equal EIRP, and the conditions described in Table 1 below are met.

TABLE 1 - MINIMUM CO-CHANNEL SEPARATION DISTANCE (kilometers)

Existing Station HAAT (meters)

Proposed
Station
HAAT
(meters)

	180	165	150	135	120	105	90	75	60	45	30	15
180											79	72
165												
150										79	74	68
135										76	71	64
120									77	74	68	61
105								79	74	71	66	58
90							79	76	71	68	63	55
75						79	76	72	68	64	60	52
60					77	74	71	68	64	60	55	48
45			79	76	74	71	68	64	60	56	50	44
30	79	76	74	71	68	66	63	60	56	50	45	39
15	72	69	68	64	61	58	55	52	48	44	39	32

20. Section 21.901(f) is removed.

21. The Section heading of Section 21.902 is changed to read "Frequency assignment and use criteria."

22. Section 21.902(b) is amended to read as follows:

§ 21.902 Frequency assignment and use criteria.

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(b) As a condition for licensing of frequencies in this service, each Multipoint Distribution Service applicant is required to:

(1) Locate its MDS station transmitter's coordinates at least 80 km (approximately 50 mi) from the coordinates of transmitters of all other authorized or previously applied-for co-channel stations in this service, except signal booster transmitters.

(2) Locate its MDS station transmitter's coordinates at least 80 km (approximately 50 mi) from the transmitters of all other licensed, with-construction permit or previously applied-for co-channel stations in the Instructional Television Fixed Television Service (ITFS), except signal booster transmitters.

(3) Locate its MDS station transmitter's coordinates either at the same coordinates or at least 48 km (approximately 30 mi) from the transmitters' coordinates of all other authorized or previously applied-for adjacent channel stations in this service, except signal booster transmitters.

(4) Locate its MDS station transmitter's coordinates either at the same coordinates or at least 48 km (approximately 30 mi) from the transmitters' coordinates of all other licensed, with-construction permit or previously applied-for adjacent channel stations in the Instructional Television Fixed Service (ITFS) operating on D, E, F, or G-channels, except signal booster transmitters.

(5) As an alternative to satisfying the requirements set forth in subsections (b)(2) and (b)(4) of this section, an applicant for an MDS station may submit a statement from affected MDS or ITFS applicants, licensees or construction permittees stating that such licensees or construction permittees, or applicants do not object to operation of the proposed MDS station.

23. Section 21.902(c), (d), (e), (f), (g), (h), (i), (j) and (k) are removed and new Sections 21.902(c), (d), and (e) are amended to read as follows:

§ 21.902 Frequency assignment and use criteria.

(c) As a condition for use of frequencies in this service, each applicant, conditional licensee and licensee is required to:

(1) Not enter into any lease or contract or otherwise take any action that would unreasonably prohibit location of another station's transmitting antenna at any given site;

(2) Cooperate fully and in good faith to resolve interference and transmission security problems;

(3) Protect 1) all co-channel registered ITFS receive sites in existence at the time an MDS station is conditionally licensed, in accordance with the 45 dB protection ratio referenced in § 74.903(a)(1) and (3); and 2) all adjacent channel registered ITFS receive sites in existence at the time an MDS station is conditionally licensed, in accordance with the 0 dB protection ratio (or 10 dB, where applicable) referenced in § 74.903(a)(2) and (3);

(i) At least 14 calendar days prior to commencement of operation, an MDS licensee is required to contact any co-channel or adjacent channel ITFS licensee within 112 km (approximately 70 mi) or 80 km (approximately 50 mi), respectively, of the MDS transmitter site and notify the ITFS licensee by certified mail, return receipt requested, of the exact date and time that MDS operation is to begin and of the MDS licensee's expected hours of operation.

(ii) If no interference as defined in § 74.903(a) occurs to the ITFS system, or if the ITFS licensee fails to complain, the MDS license becomes unconditional with respect to the need to protect ITFS adjacent or co-channel licensees after 30 days of continuous on-air operation. During this 30-day period, the MDS licensee must make every effort to ensure that the ITFS licensee is aware of the MDS licensee's actual hours of operation.

(iii) Should interference to co-channel or adjacent channel ITFS licensees occur, the Commission may, either at the request of an ITFS licensee or on its own motion, order the MDS licensee to cease operation immediately without hearing.

(iv) Prior to resuming normal operations, an MDS licensee that has ceased operation pursuant to subsection (3)(iii) of this section must reduce harmful interference to the levels required in § 74.903(a). Such reduction may be accomplished by any mutually acceptable means, including, but not limited to, reduction of MDS transmitter power, use of a directional antenna at the MDS transmitter site, provision at no cost to the ITFS operator by the MDS licensee of an improved antenna for ITFS receive sites, or any combination thereof. The MDS licensee may not resume operations until it complies with this subsection.

(v) The ITFS licensee must cooperate with the MDS licensee's efforts to comply with subsection (iv) above. Failure to cooperate fully will result in the ITFS licensee receiving protection from harmful interference based only upon use of the reference receive antenna described in § 74.903(a)(3). Failure to cooperate will also result in loss by the ITFS licensee of its right to request immediate cessation of the MDS licensee's operations in

accordance with subsection (iii) above.

(d) The following analyses, as appropriate, must be included with each application:

(1) In the case of a proposal for use of channel 2, an analysis of the potential for harmful interference with any authorized point-to-point station located within 80 km (approximately 50 mi) which utilizes the 2160-2162 MHz band, and

(2) An analysis concerning possible adverse impact upon Mexican or Canadian communications if the station's transmitting antenna is to be located within 80 km (approximately 50 mi) of the border of either Mexico or Canada.

(e) For purposes of calculating the service area of an MDS station to determine 1) the MDS licensee's eligibility for a preference in accordance with § 1.1622(e) and 2) the MDS licensee's eligibility to file for an MDS conditional license in accordance with § 21.901(d):

(1) For a station using a transmitting antenna with an omnidirectional horizontal plane radiation pattern the boundary of the service area will be 24 km (15 mi) from the transmitter site.

(2) For a station using a transmitting antenna with a non-omnidirectional horizontal plane radiation pattern the boundary of the service area will be the locus of all points located at distances from the transmitter as determined by the following equation:

$$D_b = \frac{D_{b_{\max}}}{\text{antilog} \left(\frac{G_{\max} - G}{20} \right)}$$

in which the parameters are defined as follows:

- D_b = the distance from the transmitter site to the boundary in the direction of interest
- G = the transmitter antenna gain in the direction of interest
- G_{\max} = the maximum antenna gain
- $D_{b_{\max}}$ = the distance to boundary, in the direction of maximum gain that will make the total area within the boundary of the service area equal to or less than 1,838 sq. km. (710 sq. mi.)

All distances are in kilometers, the gains are in dB and are relative to an isotropic antenna, and the antilog is taken to the base 10.

24. Section 21.904(c) is amended to read as follows:

(c) An increase in station transmitter power, above currently authorized or previously authorized values, to the maximum values provided in paragraphs (a) and (b) of this section, may be authorized, if an applicant demonstrates that the requested power increase will not cause harmful interference to any authorized or previously-proposed co-channel or adjacent-channel ITFS station in accordance with § 21.902(c)(3), or if an applicant demonstrates that:

* * * * *

25. Section 21.910(a)(4) is amended to read as follows:

§ 21.910 Special procedures for discontinuance, reduction, or impairment of service by common carrier MDS licensees.

(a)(4) Whether single-channel or multi[-]channel Multipoint Distribution Service is affected; and

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26. The phrase "protected service area" is changed to read "service area" in Sections 21.912(a), 912(b), 912(c), 912(d)(1), 913(a), 913(b), 913(c), 913(g), 913(g)(8), and 913(g)(9).

27. The term "MMDS" is deleted from Sections 913(g), 913(g)(6), 913(g)(8), and 913(g)(11).

28. Section 21.914 is amended to read as follows:

§ 21.914 Mutually exclusive applications.

Notwithstanding the provisions of §21.31(b)(2)(i) and (ii), to be entitled to be included in a random selection process with one or more conflicting applications, an application for frequencies at 2150-2162 MHz, 2596-2644 MHz, 2650-2656 MHz, 2662-2668 MHz, or 2674-2680 MHz must be received by the Commission in a condition acceptable for filing on the same calendar day as the first of the conflicting applications is received by the Commission in a condition acceptable for filing.

**SEPARATE STATEMENT OF
Commissioner James H. Quello**

**Re: Amendment of Parts 1, 2, and 21 of the Commission's Rules Governing Use
of the Frequencies in the 2.1 and 2.5 GHz Bands**

I generally support the Notice of Proposed Rulemaking, but wish to direct the attention of commenters to two areas of concern. In particular, I am concerned with footnote 29 in the Notice which indicates that ITFS registered receive sites would be given "actual protection in accordance with 47 C.F.R. Section 74.903(a)(2)." This section of the Rules, however, refers to predicted protection, not actual protection, and the footnote may be misleading to ITFS licensees. As proposed in the Notice, if an ITFS licensee does not complain of interference to its registered receive site from an MDS transmitter within a certain period of time, the protection afforded these sites under 74.903(a)(2) would be withdrawn. This is in marked contrast to the continuing protection of registered receive sites under Section 74.903 afforded ITFS licensees against other ITFS licensees. ITFS licensees and permittees should pay particular attention to this proposal in their comments.

I am also concerned that the short-spacing table (Appendix B, Table 1) may undermine the assumptions now used in processing applications for ITFS frequency use. The Commission now relies upon a fixed 50-mile transmitter-to-transmitter separation standard to determine when receive site protection showings must be submitted. I am not as confident that receive site showings may be safely dispensed with under a short spacing scheme. Again, I urge commenters to address this matter.

April 9, 1992

**STATEMENT OF
COMMISSIONER ERVIN S. DUGGAN**

**Amendment of Parts 1, 2, 21 and 74 of the Commission's Rules
Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands
(RM-7909)**

Ever since I attended the Wireless Cable Association convention last summer in Denver and heard so much about the problem, helping unsnarl the red tape hampering the wireless cable industry has been a concern of my office. My interest in smoothing and speeding the process is twofold: to encourage competition in the video marketplace and to improve the FCC's service to the public.

Last fall, I issued a separate statement on two items we adopted to reform our wireless cable rates. I pointed out that "there is much more that the FCC must do, beyond the scope of these rulemakings, to encourage the expansion of both wireless cable and ITFS operators. Now that we have addressed the legal and technical standards issues affecting these services, we need to tackle the equally difficult job of expediting our processing of MMDS and ITFS applications and establishing a speedy, 'one-stop shopping' mechanism to enable all new entrants to enhance competition in the communications marketplace."

In early February, I sent a memo to Chairman Sikes urging once again that the Commission adopt a "one-stop shopping" approach to reduce the problems faced by wireless cable operators in assembling channels and to help them bring their services to the public more expeditiously. Doing so, I argued, would demonstrate our commitment to the President's pro-competitive goals of streamlining the regulatory process and removing obstacles that are blocking industrial innovation and growth. Chairman Sikes has taken a personal interest in this matter and has devoted key staff resources to bringing this agenda item forward so quickly.

I am gratified that we are acting today to eliminate the processing backlog and to put unscrupulous application mills out of business. I have great confidence in the ability of Ralph Haller, Chief of the Private Radio Bureau, and his efficient Gettysburg operation. I hope they will create a workable computer database and plow through the backlog, which includes pending applications from 1983 and is a growing embarrassment to the Commission.

I do not want the Commission to err, on the other hand, by doing too much, too fast. I am particularly wary of changing our current interference standards to a mileage separation approach. While such a standard may expedite processing, it may deny wireless operators the flexibility they need to deliver their services in some communities, since it appears to

presuppose that all U.S. communities are equally spaced at 50-mile intervals. I am also concerned that, given the large number of changes we are proposing today, we may not have considered fully the net aggregate effect of all of these reforms on the industry. So we should beware of the unforeseen dangers of replacing a horse-and-carriage process with a speeding bullet train.

I will review the comments filed in this proceeding with great interest, especially any concerns raised by wireless cable operators, by ITFS operators, by their trade associations, and by the communications bar. My interest in this proceeding is to ensure that the public interest in competitive video delivery is adequately considered and supported.

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